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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,678	09/02/2003	Michael John Keogh		4598

7590 05/17/2004  
Michael John Keoga  
19 ABINGTON DRIVE  
PINEHURST, NC 28374

EXAMINER
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NGUYEN, CHAU N

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application N .

10/653,678

Applicant(s)

KEOGH, MICHAEL JOHN

Examiner

Chau N Nguyen

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/2/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 3 is objected to because of the following informalities: it is suggested to change claim 3 to depend on claim 2. Appropriate correction is required.

### ***Drawings***

2. The drawings are objected to because they do not have proper cross-section hatching, MPEP 608. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Merry (4,513,173).

Merry discloses a dual layer non-halogen protective sheath (Figs 2A, 2B, & 3B) for cables, comprising an outer intumescent polymer layer as means for providing thermal, fire physical and mechanical protection, and an inner polymer layer as means for providing a second level of flame protection (re claim 1).

Merry also discloses a cable comprising a metal core conductor and at least one layer (20) surrounding the core and the dual layer surrounding the insulated core (re claim 8). Noted that the cable of Merry can be a plenum or riser cable since it comprising structure and material as claimed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7 and 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keough et al. (5,698,323) in view of Belli et al. (2003/0141097).

Keough et al. discloses a non-halogen sheath for cables, comprising a non-halogen extrudable composition of (a) a copolymer of ethylene and an unsaturated ester comonomer of (i) a vinyl carboxylate wherein (A) the carboxylate group has

2 to 5 carbon atoms, (B) the copolymer being, optionally, modified with an anhydride of an unsaturated aliphatic diacid having 4 to 10 carbon atoms, (C) the copolymer having an ester content in the range of about 15 to 40% based on the weight of the copolymer and a melt index in the range of about 2 to about 25 g/10 minutes, and for each 100 parts by weight of component (a), about 100 to 250 parts by weight of magnesium hydroxide, coated or uncoated (see the abstract) (re claim 6), the unsaturated ester comonomer being vinyl acetate (re claim 7), the (inner) layer being formed of polypropylene or copolymer of polypropylene and containing sufficient acid neutralizer to prevent conductor corrosion (re claim 13) wherein the acid neutralizer is magnesium or calcium hydroxide (re claim 14) and in about 0.5 to 50 parts by weight contained in 100 parts by weight of polypropylene or polypropylene copolymer (re claim 15).

Keough et al. does not disclose an outer intumescent polymer layer as means for providing thermal, fire, physical and mechanical protection surrounding the (inner) non-halogen layer (re claims 1 and 9).

Belli et al. discloses a cable comprising an outer intumescent polymer layer (Fig. 3) as means for providing thermal, fire, physical and mechanical protection, the outer layer containing a polypropylene or polypropylene copolymer as the base resin (re claims 2 and 10), the intumescent material of the outer layer being a

melamine phosphate ([0013]) (re claims 3 and 10), the intumescent material being in about 5 to about 100 parts by weight contained in 100 parts by weight of the polypropylene or polypropylene copolymer resin ([0070]) (re claims 4 and 11), and the outer layer being of a predetermined thickness to provide sufficient thermal protection to the flame retarded inner layer (re claims 5 and 12). It would have been obvious to one skilled in the art to further surround the (inner) layer of Keough with the outer layer of Belli et al. to improve the flame-retardant properties of the sheath so as to further protect conductors from fire and mechanical forces.

Re claims 16 and 17, it would have been obvious to one skilled in the art to use the modified sheath of Keough for a building wire or an automobile primary wire since the modified sheath of Keough has an improved fire protection and since using a dual layer having flame retardant properties to surround a building wire or an automobile wire is known in the art.

#### *Cited Art*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barousseau et al. discloses a cable having a dual layer sheath.

### *Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/653,678  
Art Unit: 2831

Page 7

A handwritten signature in cursive script, appearing to read "Chau N Nguyen".

Chau N Nguyen  
Primary Examiner  
Art Unit 2831